



KIET GROUP OF INSTITUTIONS, GHAZIABAD
Department of Information Technology

**Course
Outcome**

Session 2021-22
**Department of Information
Technology**



KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Information Technology

Index

3rd Semester		
S No.	Subject Code	Subject Name
1	KAS-302	Maths IV
2	KVE-301	Universal Human Values
3	KCS-301	Data Structure
4	KCS-302	Computer Organization and Architecture
5	KCS-303	Discrete Structures & Theory of Logic
6	KNC-301	Computer System Security
7	KCS-351	Data Structures Using C Lab
8	KCS-352	Computer Organization Lab
9	KCS-353	Discrete Structure & Logic Lab
10	KCS-354	Mini Project or Internship Assessment

5th Semester		
S No.	Subject Code	Subject Name
1	KCS 055	Machine Learning Techniques
2	KNC 501	Constitution of India, Law and Engineering
3	KCS 501	Database Management Systems
4	KCS 503	Design And Analysis Of Algorithm
5	KCS 054	Object Oriented System Design
6	KIT 501	Web Technologies
7	KCS 551	Database Management Systems Lab
8	KCS 553	Design and Analysis of Algorithm Lab
9	KIT 551	Web Technologies Lab
10	KCS 554	Mini Project or Internship Assessment

7th Semester		
S No.	Subject Code	Subject Name
1	KCS 078	Deep Learning
2	KCS 071	Artificial Intelligence
3	KHU 702	Project Management & Entrepreneurship
4	KOE-076	Value Relationship & Ethical Human Conduct- For A Happy & Harmonious Society
5	KIT 751	Artificial Intelligence Lab
6	KIT 752	Mini Project or Internship Assessment
7	KIT 753	Project



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CO PO and Mapping of CO PO 2nd Year

(2020 – 2024 BATCH)

Session 2021-22 Semester:- 3rd

3rd Semester		
S No.	Subject Code	Subject Name
1	KAS-302	Maths IV
2	KVE-301	Universal Human Values
3	KCS-301	Data Structure
4	KCS-302	Computer Organization and Architecture
5	KCS-303	Discrete Structures & Theory of Logic
6	KNC-301	Computer System Security
7	KCS-351	Data Structures Using C Lab
8	KCS-352	Computer Organization Lab
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10	KCS-354	Mini Project or Internship Assessment



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Theory

												Bloom's Taxonomy/ Knowledge Dimension			
Math-IV	CO1	Study the methods to solve Partial Differential Equations										K3/P			
	CO2	Apply the concept of method of separation of variables to solve wave, heat, Laplace and transmission equations.										K3/P			
	CO3	Evaluate moments, skewness, kurtosis, linear and non linear regression.										K5/P			
	CO4	Apply the concept of probability to solve discrete and continuous probability distributions.										K3/C,P			
	CO5	Apply the concept of sampling to study t-test, F-test and Chi-square test, One way Analysis of Variance (ANOVA).										K3/C,P			
CO \ PO Mpping		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1		3	3	3	2	2	2	1	--	--	--	2	2	3	2
CO2		3	3	1	1	1	--	1	--	--	--	1	2	3	2
CO3		3	3	2	1	1	1	1	--	--	--	1	2	3	2
CO4		3	3	3	3	1	1	1	--	--	--	1	2	3	2
CO5		3	3	3	3	1	1	1	--	--	--	1	2	3	2



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												Bloom's Taxonomy Knowledge Dimension		
Universal Human Values	CO1	Understand and analyse the essentials of human values and skills, self exploration, happiness and prosperity.										K2/F, 4/P		
	CO2	Evaluate coexistence of the "I" with the body.										K5/C		
	CO3	Identify and evaluate the role of harmony in family, society and universal order.										K4/P,5/C		
	CO4	Understand and associate the holistic perception of harmony at all levels of existence.										K2/F,6/C		
	CO5	Develop appropriate technologies and management patterns to create harmony in professional and personal lives.										K6/C		
CO \ PO Mpping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	-	-	-	-	-	-	3	-	-	-	1	-	-	-
CO2	-	-	-	-	-	1	-	-	-	-	-	-	-	-
CO3	-	-	-	-	2	1	-	-	-	-	-	-	-	-
CO4	-	-	-	-	2	2	-	-	-	-	1	-	-	-
CO5	-	-	-	-	2	2	3	-	-	-	1	-	-	-



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													Bloom's Taxonomy Knowledge Dimension	
Data Structure (KCS-301)	CO1	Apply the knowledge of various data structures and its operations											K3 C, P	
	CO2	Apply standard algorithms for searching and sorting											K3 C, P	
	CO3	Analyze efficiency of different algorithms using time and space complexity											K4 C, P	
	CO4	Explore the concept, application and implementation of recursion											K4 C, P	
	CO5	Implementing the suitable data structure with respect to its performance to model a real world problem											K6 C, P, M	
CO \ PO Mpping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	-	2	2	2	-	-	-	-	-	-	3	-	-
CO2	2	2	2	1	-	-	-	-	-	-	1	1	-	-
CO3	3	2	2	3	-	-	-	-	-	-	1	2	3	-
CO4	3	-	2	3	2	-	1	1	-	-	1	1	2	-
CO5	3	2	2	1	-	-	-	-	-	-	-	2	3	3



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													Bloom's Taxonomy Knowledge Dimension	
Computer Organization and Architecture	CO1	Understand and describe the basic organization and operation of the components of a digital computer system.										K1, K2/C		
	CO2	Illustrate various arithmetic and logical operations on different types of numbers to design an arithmetic and logic unit.										K3, K4/P,M		
	CO3	Analyze the performance issues of the processor and classify the control unit implementation techniques.										K4/C,M		
	CO4	Categorize the hierarchical memory system and examine the virtual memory implementation techniques.										K3, K4/P,M		
	CO5	Compare the different I/O data transfer techniques, and describe the different ways of communication among I/O devices and standard I/O interfaces										K2, K5/C,M		
CO \ PO Mpping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	2	1	2	1	1	1	1	-	1	1	3	3
CO2	3	3	3	1	3	1	-	-	1	-	1	1	3	3
CO3	2	2	2	1	3	1	-	-	1	-	1	1	3	3
CO4	2	2	2	1	1	1	-	-	1	-	1	1	3	3
CO5	2	2	2	1	1	1	-	-	1	-	1	1	3	3



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												Bloom's Taxonomy Knowledge Dimension			
Discrete Structures & Theory of Logic	CO1	Acquire Knowledge of Logical Notations which is used to define and understand the basic fundamental mathematical concepts such as sets, relations, functions, and integers.										K1, K2 C			
	CO2	Discuss various structures and properties of modern algebra.										K3, K4 P,M			
	CO3	Employ logical abilities such as reasoning to set up mathematical models for real life problems by applying advanced counting and computing techniques like generating function and recurrence relation.										K4 C,M			
	CO4	Demonstrate various problems in the field of computer science using trees and graphs.										K3, K4 P,M			
	CO5	Design a solution with the help of induction hypotheses, simple induction proofs and recurrences.										K2, K5 C,M			
CO \ PO Mpping		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1		1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO2		3	2	2	3	2	2	1	1	1	1	1	2	3	3
CO3		3	3	3	3	2	2	1	1	1	1	1	2	3	3
CO4		3	2	2	3	3	2	2	1	1	1	1	2	3	3
CO5		3	3	2	2	3	2	2	1	1	1	1	2	3	3



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												Bloom's Taxonomy Knowledge Dimension		
Computer System Security	CO1	Understand software bugs that pose cyber security threats and to explain how to fix the bugs to mitigate such threats.										K2,C,P		
	CO2	Identify cyber-attack scenarios to web browsers and web servers and to explain how to mitigate such threats										K3 ,C, P		
	CO3	Understand and discover mobile software bugs posing cyber security threats, explain and recreate exploits, and to explain mitigation techniques										K3 ,C, P		
	CO4	Determine the urgent need for cyber security in critical computer systems, networks, and world wide web, and to explain various threat scenarios										K3 ,C, P		
	CO5	Discuss the well-known cyber-attack incidents, explain the attack scenarios, and mitigation techniques										K3 ,C, P		
CO \ PO Mpping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	1	3	2	2	2	2	3	3	2	1	3	2	1
CO2	2	3	1	3	3	2	1	3	2	2	1	3	1	2
CO3	2	2	3	2	3	2	1	3	1	3	1	3	2	3
CO4	3	2	3	3	2	3	1	3	3	2	1	3	1	2
CO5	3	2	2	3	3	1	2	3	3	2	1	3	3	1



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Practical

												Bloom's Taxonomy Knowledge Dimension		
DSUC Lab (KCS-351)	CO 1	Interpret and compute asymptotic notation of algorithm and analyse consumption of resources.										K3,K4/C P		
	CO 2	Exemplify and implement stack, queue and list ADT, tree, and graph to manage the memory using static and dynamic allocations.										K3,K4/C P		
	CO 3	Implement binary search tree to design applications like expression trees.										K3,K5/C P		
	CO 4	Identify, model, solve and develop code for real life problems like shortest path and MST.										K3,K4/C P		
	CO 5	Develop and compare the comparison-based search algorithms and sorting Algorithms										K3,K4/C P		
CO \ PO Mpping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	2	3	3	2	-	-	-	-	-	-	-	3	-	-
CO2	2	3	3	2	-	-	-	-	-	-	-	3	-	-
CO3	3	2	3	2	-	-	-	-	-	-	-	2	3	-
CO4	3	2	3	2	-	-	-	-	-	-	-	3	3	3
CO5	2	3	3	2	-	-	-	-	-	-	-	2	2	2



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												Bloom's Taxonomy Knowledge Dimension			
CO Lab	CO1	Examine the output of the basic logic gates for different combinations of input.										K3/P			
	CO2	Design and simulate the combinational circuits for binary arithmetic (such as adders, subtractors, and multiplier) and code converter										K3, K5/P, M			
	CO3	Design and simulate combinational circuits for encoders/decoders and selection devices multiplexers/de-multiplexers using logic gates										K3, K5/P, M			
	CO4	Design and simulate the basic building block of the sequential circuits (i.e. SR and D Flip Flops) using logic gates.										K3, K5/P, M			
	CO5	Design and simulate the 2-bit Arithmetic Logic Unit using logic gates.										K3, K5/P, M			
CO \ PO Mpping		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1		3	2	2	1	3	2	-	-	1	-	1	1	3	3
CO2		3	2	3	1	3	2	-	-	1	-	1	1	3	3
CO3		2	2	3	1	3	1	-	-	1	-	1	1	3	3
CO4		2	2	3	1	2	1	-	-	1	-	1	1	3	3
CO5		2	2	3	1	2	1	-	-	1	-	1	1	3	3



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												Bloom's Taxonomy Knowledge Dimension			
DSTL Lab	CO1	To Implement various Set operations.										K3/P			
	CO2	To implement and demonstrate universal logic gates.										K3/P			
	CO3	To Implement various logical expression in using programming.										K3/P			
	CO4	To Implement various programming problems based on binary search.										K3/P			
	CO5	To Design and Implement practical applications based on graphs and shortest paths.										K3, K6/P			
CO \ PO Mpping		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1		3	2	2	3	2	2	1	1	1	1	1	2	3	3
CO2		3	3	3	3	2	2	1	1	1	1	1	2	3	3
CO3		3	2	2	3	3	2	2	1	1	1	1	2	3	3
CO4		3	3	2	2	3	2	2	1	1	1	1	2	3	3
CO5		3	2	2	2	3	2	2	1	1	1	1	2	3	3



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													Bloom's Taxonomy Knowledge Dimension		
Mini Project	CO 1	Analyze and understand the real life problem and apply their knowledge to get programming solution.										K3,C,P			
	CO 2	Engage in the creative design process through the integration and application of diverse technical knowledge and expertise to meet customer needs and address social issue										K4,P			
	CO 3	Use the various tools and techniques, coding practices for developing real life solution to the problem										K6,M			
	CO 4	Writing and presentation skill by using report about what they are doing in mini project										K5,M			
	CO 5	Find out the errors in application solutions and its implementations										K5,M			
CO \ PO Mpping		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1		3	3	3	2	3	3	2	1	3	3	3	3	3	3
CO2		3	3	3	2	3	3	2	1	3	3	3	3	3	3
CO3		3	3	3	3	3	3	2	1	3	3	3	3	3	3
CO4		3	3	2	2	3	3	2	1	3	3	3	3	3	3
CO5		3	3	2	2	3	3	2	1	3	3	3	3	3	3



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CO PO and Mapping of CO PO 3rd Year

(2019 – 2023 BATCH)

Session 2021-22 Semester:- 5th

5 th Semester		
S No.	Subject Code	Subject Name
1	KCS 055	Machine Learning Techniques
2	KNC 501	Constitution of India, Law and Engineering
3	KCS 501	Database Management Systems
4	KCS 503	Design And Analysis Of Algorithm
5	KCS 054	Object Oriented System Design
6	KIT 501	Web Technologies
7	KCS 551	Database Management Systems Lab
8	KCS 553	Design and Analysis of Algorithm Lab
9	KIT 551	Web Technologies Lab
10	KCS 554	Mini Project or Internship Assessment



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Theory

												Bloom's Taxonomy Knowledge Dimension		
Machine Learning Techniques	CO 1	Understand the need for machine learning for various problem solving										K2 C,P		
	CO 2	Understand a wide variety of learning algorithms and how to solve computing problem.										K3 C,P		
	CO 3	Design appropriate machine learning algorithms and apply the algorithms to a real-world problems.										K5 P		
	CO 4	Understand the neural nets for solving real time problem and evaluating the performance.										K6 P		
	CO 5	Optimize the models learned and report on the expected accuracy that can be achieved by analyzing the models.										K5 P		
CO \ PO Mpping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	2	3	2	2	2	1	1	-	1	3	2	3
CO2	3	3	3	3	3	2	2	-	1	-	1	3	3	3
CO3	3	3	3	3	3	2	2	-	1	-	1	3	3	3
CO4	3	3	3	3	3	2	2	-	1	-	1	3	3	3
CO5	3	3	3	3	3	2	2	-	1	-	1	3	3	3



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												Bloom's Taxonomy Knowledge Dimension		
Database Management System	CO 1	Acquire the knowledge of database design methodology for implementing real life applications.										K3 C,P		
	CO 2	Design an information model expressed in the form of ER diagram.										K6 C,P, M		
	CO 3	Apply real time problems of structured query language to databases.										K3 C,P		
	CO 4	Analyze the redundancy problem in database tables using normalization.										K4 C,P		
	CO 5	Identify the broad range of database management issues including data integrity, security and recovery in terms of transactions.										K4 C,P		
CO \ PO Mpping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	-	-	-	3	-	-	1	1	-	1	2	-	2
CO2	2	1	3	2	3	-	1	1	1	3	2	1	3	2
CO3	3	-	-	-	3	-	-	1	-	1	1	1	-	-
CO4	2	3	-	3	-	-	-	1	-	-	-	1	-	2
CO5	2	3	-	3	-	-	-	1	-	-	-	1	-	2



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													Bloom's Taxonomy Knowledge Dimension	
Design and Analysis of Algorithm	CO 1	Analyze running time of algorithms using asymptotic methods.											K4 C,P	
	CO 2	Analyze advanced data structure algorithms to calculate their complexities											K4 C,P	
	CO 3	Create solutions of Optimization problems using Dynamic Programming and Greedy Approach.											K6 P, M	
	CO 4	Apply backtracking and branch & bound approaches for finding efficient solutions.											K3 P	
	CO 5	Understand the concepts of NP Completeness and find alternate solutions using Randomized and Approximation Algorithms.											K2 C, P	
CO \ PO Mpping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	-	3	-	2	-	-	-	1	-	-	-	3	-	1
CO2	-	3	-	3	2	-	-	-	-	-	-	2	1	1
CO3	3	1	3	-	2	-	-	-	1	1	1	2	1	2
CO4	2	-	-	-	-	-	-	-	1		1	1	-	-
CO5	-	-	-	1	2	-	-	-	-	-	-	1	1	-



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												Bloom's Taxonomy Knowledge Dimension		
Web Technology	CO 1	Apply the knowledge of the internet and OOP concept in computing and create desktop based programs using Java programming language.										K6, C, P		
	CO 2	Understand, analyze, apply and create HTML, DHTML, and XML documents for web development										K6, C, P		
	CO 3	Understand, apply and create programs for web development using JavaScript and create network based programs using Java.										K6, C, P		
	CO 4	Understand, analyze and build JDBC concepts and also develop the Java Beans for business logic.										K6, C, P		
	CO 5	Understand the concept of using JSP and Servlets in server side scripting and create web based small web applications using JSP and servlets.										K6, C, P		
CO \ PO Mpping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	3	3	3	1	1	1	1	1	2	3	3	3
CO2	3	3	3	3	3	1	1	1	1	1	1	3	3	3
CO3	3	3	3	3	3	1	1	1	1	1	1	3	3	3
CO4	3	3	3	3	3	1	1	1	2	1	1	3	3	3
CO5	3	3	3	3	3	1	1	1	2	1	2	3	3	3



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												Bloom's Taxonomy Knowledge Dimension		
Object Oriented System Design	CO 1	Understand the application development and analyze the insights of object oriented programming to implement application.										K4 C,P		
	CO 2	Understand, analyze and apply the role of overall modeling concepts (i.e. System, structural).										K4 C,P		
	CO 3	Learn the structured analysis / structured design and analyze the oops programming style.										K4 C,P		
	CO 4	Apply and evaluate the concepts of C++ for the implementation of object oriented concepts.										K5 F,P		
	CO 5	Design and evaluate the programming concepts to implement object oriented modeling in C++.										K6 P,M		
CO \ PO Mpping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	1	3	3	3	1	2	2	3	2	3	3	3
CO2	3	3	2	3	3	3	1	2	3	3	3	3	3	3
CO3	3	2	2	2	3	3	1	2	2	3	2	3	3	3
CO4	3	3	3	3	3	3	2	2	3	3	3	3	3	3
CO5	3	3	3	3	3	3	2	2	3	3	3	3	3	3



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													Bloom's Taxonomy Knowledge Dimension	
Constitution of India, Law and Engineering	CO 1	Identify and explore the basic features and modalities about Indian constitution.										K1, K2 F,C		
	CO 2	Differentiate and relate the functioning of Indian parliamentary system at the center and state level.										K2,K3 F,C		
	CO 3	Demonstrate different aspects of Indian Legal System and its related bodies.										K2,K3 F,C		
	CO 4	Discover and apply different laws and regulations related to engineering practices.										K1,K2,K3, F, C		
	CO 5	Interpret and evaluate the role of engineers with different organizations and governance models										K2,K5 F,C		
CO \ PO Mpping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	1	1	1	1	1	2	2	2	1	1	1	1	1	1
CO2	1	1	1	1	2	2	2	1	2	1	1	2	2	1
CO3	1	1	1	2	1	1	2	1	2	1	1	2	1	1
CO4	1	1	1	3	2	2	2	2	1	1	1	2	2	1
CO5	1	1	1	3	2	2	2	2	2	1	1	2	2	1



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Practical

Bloom's Taxonomy|
Knowledge Dimension

DBMS Lab	CO 1	Use the case tools for creation of ER Diagram.											K6, C, P	
	CO 2	Create and modify the database and apply different constraints using DDL commands.											K6, C, P	
	CO 3	Analyze DML commands											K6, C, P	
	CO 4	Display data from multiple tables using joins and apply different functions of SQL.											K6, C, P	
	CO 5	Implement cursor, trigger, procedures and functions using PL/SQL.											K6, C, P	
CO \ PO Mpping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	3	2	2	1	-	1	2	2	3	3	3	3
CO2	3	3	2	2	3	1	-	1	2	2	2	3	3	3
CO3	3	3	2	2	2	-	-	-	2	1	2	2	3	3
CO4	3	3	2	2	2	-	-	-	2	1	2	2	3	3
CO5	3	3	2	2	2	-	-	-	2	2	3	2	3	3



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													Bloom's Taxonomy Knowledge Dimension		
DAA Lab	CO 1	Implement algorithm to solve problems by iterative approach.											K3,K4 C,P		
	CO 2	Implement algorithm to solve problems by divide and conquer approach											K3,K4 C,P		
	CO 3	Implement algorithm to solve problems by Greedy algorithm approach.											K6 P,M		
	CO 4	Implement algorithm to solve problems by Dynamic programming, backtracking, branch and bound approach.											K2,K3 P, M		
	CO 5	Implement algorithm to solve problems by branch and bound approach.											K2,K3 C,P		
CO \ PO Mpping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	
CO1	-	3	-	2	-	-	-	-	-	-	-	3	-	-	
CO2	-	3	-	3	2	-	-	-	-	-	-	2	-	-	
CO3	3	-	3	-	2	-	-	-	-	-	2	2	-	2	
CO4	2	-	-	-	-	-	-	-	-	-	2	2	-	-	
CO5	-	-	-	-	2	-	-	-	-	-	-	2	-	-	



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													Bloom's Taxonomy Knowledge Dimension	
WT Lab	CO 1	Understand fundamentals of web development and Java, including defining classes, invoking methods, using class libraries, Applet, AWT.											K6, C, P	
	CO 2	Understand, analyze and apply the role of scripts/languages like HTML, DHTML, CSS, XML, DOM, and SAX to solve real world problems.											K6, C, P	
	CO 3	Understand, analyze and design the role of JavaScript for dynamic web pages.											K6, C, P	
	CO 4	Design and deploy different components using EJB, and database tables using JDBC and produce various results based on given query											K6, C, P	
	CO 5	Design and deploy a server-side java application called Servlet & JSP tools to catch form data sent from client, process it and store it on database.											K6, C, P	
CO \ PO Mpping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	3	3	3	1	1	1	2	1	2	3	3	3
CO2	3	3	3	3	3	1	1	1	1	1	1	3	3	3
CO3	3	3	3	3	3	1	1	1	1	1	1	3	3	3
CO4	3	3	3	3	3	1	1	1	1	1	1	3	3	3
CO5	3	3	3	3	3	1	1	1	2	1	2	3	3	3



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													Bloom's Taxonomy Knowledge Dimension	
Mini Project	CO 1	Analyze and understand the real life problem and apply their knowledge to get programming solution.											K3,C,P	
	CO 2	Engage in the creative design process through the integration and application of diverse technical knowledge and expertise to meet customer needs and address social issue											K4,P	
	CO 3	Use the various tools and techniques, coding practices for developing real life solution to the problem											K6,M	
	CO 4	Writing and presentation skill by using report about what they are doing in mini project											K5,M	
	CO 5	Find out the errors in application solutions and its implementations											K5,M	
CO \ PO Mpping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	3	2	3	3	2	1	3	3	3	3	3	3
CO2	3	3	3	2	3	3	2	1	3	3	3	3	3	3
CO3	3	3	3	3	3	3	2	1	3	3	3	3	3	3
CO4	3	3	2	2	3	3	2	1	3	3	3	3	3	3
CO5	3	3	2	2	3	3	2	1	3	3	3	3	3	3



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CO PO and Mapping of CO PO 4th Year

(2018 – 2022 BATCH)

Session 2021-22 Semester:- 7th

7 th Semester		
S No.	Subject Code	Subject Name
1	KCS 078	Deep Learning
2	KCS 071	Artificial Intelligence
3	KHU 702	Project Management & Entrepreneurship
4	KOE-076	Value Relationship & Ethical Human Conduct- For A Happy & Harmonious Society
5	KIT 751	Artificial Intelligence Lab
6	KIT 752	Mini Project or Internship Assessment
7	KIT 753	Project



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Theory

												Bloom's Taxonomy Knowledge Dimension			
Deep Learning	CO1	Discuss mathematics behind functioning of Artificial neural network										K3 P			
	CO2	Illustrate different algorithms of deep learning for classification problem.										K4 P			
	CO3	Analyse different dimensionality reduction techniques for real world dataset										K4 P			
	CO4	Evaluate different deep learning models for optimised solution of real world problems										K5 P			
	CO5	To design deep learning solution for complex real world problem using tensorflow										K6 P, M			
CO \ PO Mpping		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2
CO1		3	3	2	1	3	1	-	-	-	-		2	2	1
CO2		3	3	2	2	3	1	-	-	-	-	1	2	2	2
CO3		3	3	3	2	3	1	-	-	1	-	1	2	2	2
CO4		3	3	3	3	3	1	-	-	1	-	2	2	3	3
CO5		3	3	3	3	3	1	-	-	2	-	3	3	3	3



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												Bloom's Taxonomy Knowledge Dimension			
Artificial Intelligence	CO1	Understand the concept of artificial intelligence and intelligent agents.										K2 C			
	CO2	Apply basic principles of AI in solutions that require problem solving methods.										K3 C, P			
	CO3	Determine the effectiveness of truths by knowledge representation methods in AI.										K5 C, P			
	CO4	Abstract intelligent agents by exploring the architecture and communication of agents.										K6 C, P, M			
	CO5	Analyze various AI applications in Information retrieval and extraction, Natural Language Possessing, speech recognition and Robots.										K4 C, P, M			
CO \ PO Mpping		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1		3	-	-	-	-	3	2	2	-	-	-	3	2	2
CO2		3	3	2	2	3	-	-	-	2	-	-	3	3	2
CO3		3	3	2	3	3	-	-	-	2	-	-	3	3	3
CO4		3	3	3	3	3	-	-	2	2	-	2	3	3	3
CO5		3	3	2	3	3	3	2	2	-	-	-	3	3	3



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												Bloom's Taxonomy Knowledge Dimension			
Project Management & Entrepreneurship	CO1	Understand the theories of entrepreneurship and Entrepreneurial Development Programmes										K2 C			
	CO2	Create innovative business ideas and market opportunities										K5 C, P, M			
	CO3	Understand the importance of Project Management and Project's life cycle										K2 C, P			
	CO4	Analyze Project Finance and project report										K4 C, P			
	CO5	Analyze Social Sector Perspectives and Social Entrepreneurship										K2 C, P			
CO \ PO Mpping		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1		-	-	-	-	-	1	1	2	2	-	3	1	-	-
CO2		-	-	-	-	-	2	2	3	3	-	3	2	-	-
CO3		-	-	-	-	-	3	3	2	3	-	3	2	-	-
CO4		-	-	-	-	-	2	3	2	3	-	3	2	-	-
CO5		-	-	-	-	-	2	3	3	2	-	3	3	-	-



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													Bloom's Taxonomy Knowledge Dimension	
Value Relationship & Ethical Human Conduct- For A Happy & Harmonious Society (KOE-076)	CO1	<i>Understand</i> value education, basic human aspirations and their fulfillment by learning harmony at individual, family, society and nature/existence.										K2 / C,P		
	CO2	<i>Distinguish</i> between Self and Body at individual level which is coexistence of self and body to achieve harmony within.										K4/ C,P		
	CO3	<i>Apply</i> harmonious relationships based on trust, respect, and other naturally acceptable feelings in human-human interaction and explore their role in ensuring a harmonious society.										K3/ C,P		
	CO4	<i>Apply</i> mutually fulfilling participation with the nature/existence.										K3/ C,P		
	CO5	<i>Evaluate</i> the ethical practices to actualize a harmonious environment wherever they work.										K5/ / C,P		
CO \ PO Mpping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2
CO1	-	-	-	-	1	2	2	3	2	1	2	1	1	1
CO2	-	-	-	-	1	2	2	3	2	1	2	1	1	1
CO3	-	-	-	-	1	2	2	3	3	1	2	1	1	1
CO4	-	-	-	-	1	2	2	3	3	1	2	1	1	1
CO5	-	-	-	-	1	2	2	3	3	1	3	1	1	1



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Practical

												Bloom's Taxonomy Knowledge Dimension			
AI Lab	CO1	Explore the features of PROLOG programming language, including basic syntax, selection, and search strategies of PROLOG.										K3 C, P			
	CO2	Demonstrate syntax, semantics, and natural deduction proof system of propositional and predicate logic										K3 C, P			
	CO3	Demonstrate the recursion and sequences using PROLOG programming.										K3 C, P			
	CO4	Demonstrate the PROLOG programming language skills by implementing various real-life problems.										K4 C, P			
CO \ PO Mpping		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1		3	3	2	2	3	-	-	-	-	-	2	2	2	3
CO2		3	3	2	2	3	-	-	-	-	-	2	2	2	3
CO3		3	3	3	2	3	-	-	-	-	-	2	2	2	3
CO4		3	3	3	2	3	-	-	-	-	-	2	2	3	3



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													Bloom's Taxonomy Knowledge Dimension	
Project (KIT-753)	CO1	<i>Analyze</i> and understand the real life problem and apply knowledge to get programming solution.										K4/ C, P		
	CO2	Engage in the creative <i>design</i> process through the integration and application of diverse technical knowledge and expertise to meet customer needs and address social issues.										K6/ C, P		
	CO3	Use the various tools and techniques, coding practices for <i>developing</i> real life solution to the problem.										K6/ C,P		
	CO4	<i>Formulate</i> the detailed report about what has been done in project.										K6/ C, P		
	CO5	<i>Figure out</i> the errors in software solutions and in implementations										K6/ C, P		
	PSO 1	Ability to design and develop IT enabled computing systems using concepts of Mathematics, Science, and multidisciplinary Engineering practices to meet ethical commercial & societal objectives.										K6/ C, P		
	PSO 2	Ability to <i>test</i> , analyze and deploy the innovative IT infrastructure solutions to integrate and evolve a larger computing system for real life problem(s).										K5/ C, P		
CO \ PO Mpping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2
CO1	3	3	3	3	3	2	1	1	3	3	3	3	3	3
CO2	3	3	3	3	2	2	1	1	3	2	3	2	3	3
CO3	2	2	3	3	3	2	1	1	3	2	3	3	3	3
CO4	2	1	1	3	2	1	1	1	3	3	2	3	3	3
CO5	3	3	2	3	3	1	1	1	3	3	1	2	3	3